

# W5YI

Nation's Oldest Ham Radio Newsletter

## REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

Fred Maia, W5YI, Editor, P.O. Box 565101, Dallas, TX 75356-5101

### ★ In This Issue ★

**New Permissible Communications**  
**History of Ham No-Business Rule**  
**FCC Agrees to Relax Guidelines**  
**Press Release Issued**  
**FCC Enforcement News**  
**AMSAT Appoints New Officers**  
**E-Mail, Networking & Info Highway**  
**Broadcasters Worry About RF Rules**  
**Personal Computing Update**  
**Extended Coverage Transceivers**  
**Amateur Radio Call Signs to July 1st**  
**Broadcasting from the High Seas**  
**Micro Power Broadcasting: \$20K NAL**  
**Unique AMRAD-OSCAR Satellite**  
**..and much, much more!**

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## FCC RELAXES HAM PROHIBITED COMMUNICATIONS

Historically the Amateur Service has been a communications service used as a means of individual development of electronic and telecommunication skills. To encourage personal development, various classes of operator licenses yield increasing frequency, mode and power level benefits in exchange for increased skill and knowledge.

However, not all communications must pertain to personal development. Recreational communications are permissible, as are many communications relating to personal expediency and public welfare. Unlike the other personal radio services, amateur radio is entirely a hobby or recreational service even though it is not recognized as such in the rules.

Nothing is more basic to ham radio than the communications content rules. These regulations detail what you may and may not say on ham radio frequencies. At present, amateur service rules prohibit all business-type communications on the ham bands. This non-commercial service is primarily structured to encourage educational and technical development and to assist in emergencies rather than to provide for the personal communications of its participants.

Public service communications where there is a pecuniary component are also prohibited, as is routine communications assistance to various

government agencies that have their own radio allocated frequencies. This will all change shortly.

In keeping with the Commission's goals to "generally encourage the larger and more effective use of radio in the public interest", on July 15th the Federal Communications Commission relaxed the "business communications" prohibitions in the amateur service - including personal communications that have an incidental financial nature.

The use of VHF/UHF amateur spectrum for personal business communications should greatly interest a huge segment of the American people, especially if the retail price of communications transceivers - particularly hand held - become low enough to react to mass marketing.

### **History of "no business" communications**

The current definition of a radio amateur as a person "interested in radio technique solely with a personal aim and without pecuniary interest" was adopted some 66 years ago in 1927 by the International Radiotelegraph Conference - the forerunner of today's ITU. That exact same wording is included in today's *International Radio Regulations* and in the current Part 97.3(4) definition.

Thus "...without pecuniary interest" is an international requirement. According to the



# W5YI REPORT

Nation's Oldest Ham Radio Newsletter

Page #2

August 1, 1993

dictionary, "pecuniary" means having to do with or relating to money. And therein lies the problem. Much of the communications activity we as amateurs get involved in occasionally benefits the financial affairs of someone.

The following year (1928) the amateur service was internationally defined, the old Federal Radio Commission agreed that amateurs should not be involved in news gathering, transmitting music or entertainment or any other form of commercial communications.

In 1930 a Rule was adopted that said an amateur station *"shall not be used to transmit or receive messages for hire, nor for communication for material compensation, direct or indirect, paid or promised."* In other words, amateurs are prohibited from selling a communications service.

That Rule carried over to the Federal Communications Commission when it was established in 1934 by the *Communications Act*. It remains virtually unchanged today in Section §97.113(b)

In 1938 the FCC attempted to stop abuses by business groups and corporations by refusing to issue them an amateur license. Individuals were prohibited from providing communications for their firms. Schools, companies, corporations and other organizations were prohibited from obtaining an amateur radio license "for its use" - meaning the use of the firm. This was the early mechanism by which other than amateur radio communications was kept off the ham bands.

Twenty-one years ago, (in 1972) the FCC sought to shut down various public service charitable networks operating on the ham bands. They specifically mentioned the Red Cross, March of Dimes, National Cystic Fibrosis and Eye Bank Association nets. The Commission also felt the need to preclude the use of ham radio as a medium for the organized endorsement of social, political or economic views. In other words, ham radio was not meant to be a public 'soap box.'

The Commission said that the expansion of this type of communications could prevent regular use of amateur frequencies. A challenge charging that the rules violated the amateur's Constitutional right to free speech was rejected by the Courts.

Later on the same year, the FCC changed their emphasis from barring commercial communications "not for their own use" to prohibiting commercial third party traffic. The new rules outlawed amateur transmissions which facilitated the regular business or commercial affairs of any party. The new position permitted public service communications on behalf of organizations such as the Red Cross and Eye Bank - but prohibited their business communications and activities such as fund raising.

Ten years ago, (in 1983) the FCC further clarified that business communications were prohibited - such as calling one's office via amateur radio to receive business messages and so forth. The Order stated that the Amateur Radio Service should not be used as an alternative to other services (such as land mobile, broadcast, maritime or common carrier) - all of which have their own spectrum.

The 1983 Order also defined business communications as being *"...used in the broadest context. It includes all types of communications which are intended to facilitate the regular business or commercial affairs of any party, whether individual or organization, whether for profit or not-for-profit, whether charitable or commercial and whether government or non-government."*

The on again, off again, on again use of ham spectrum to assist national organizations such as the Red Cross was now off again! The Private Radio Bureau, however, said that they did not mean the Order to prohibit traditional public service activities. So public service communications was now back on again. The use of ham radio in cases of emergency - such as for calling a tow truck - was held to be a legal use of ham radio. Basically that is the history of business use of Amateur Radio.

## Background

This current investigation in business use of ham radio got its start nearly two years ago when Saginaw, Michigan amateur, Kim Nothelfer, KB8DAC, queried the FCC about filing American Radio Relay League (ARRL) Field Organization reports over amateur packet radio. He asked how this might be accomplished and still stay within communications content bounds of §97.113.

The FCC responded that the Rules *"...specifically prohibits an amateur station from transmitting any communication the purpose of which is to facilitate the business or commercial affairs of any party."* In short, ARRL organization related reports were banned from the amateur airwaves under the current regulations.

But Nothelfer's inquiry certainly was not unusual. The Commission has been overwhelmed in recent years with many requests from the amateur community to deviate from the usual communications permitted by Part §97.113. Among other things, the "Prohibited transmissions" rule bans all amateur communications with a business or logistical component and routine communications that are already authorized to another radio service. This certainly reduces the value of the service to its licensees and others who might benefit from volunteer communications.

The Nothelfer letter kicked off a series of



meetings between the ARRL and the FCC's Private Radio Bureau about the business rule. At the ARRL National Convention a couple of years ago, the FCC acknowledged that permitting "other than regular" amateur communications on the ham bands would indeed "...provide greater flexibility to transmit communications for public service projects and personal matters."

In trying to find a way to accommodate the steady stream of these requests, the FCC initially thought that perhaps a system of communications priorities might allow amateurs to more fully participate in non-amateur communications. Initially, three types or levels of amateur communications were suggested; Priority, Primary and Secondary.

Those communications which involve emergencies and disasters where the safety of life and property are at stake would be "Priority." Primary communications would be the currently authorized amateur communications. The transporting of all other non-amateur information would be Secondary.

The FCC said the new Business Rule might be, "(1) No amateur shall sell a communication service that uses amateur service frequencies and (2) the control operator of an amateur station may accept compensation for periods of time during which the station is transmitting Morse practice, information bulletins and classroom instruction."

The real challenge was how to write a simple, easy to understand rule that allows an expansion of amateur communications without throwing open ham frequencies to those who would exploit them commercially. The Commission asked for recommendations from the American Radio Relay League, the nations largest organization of ham operators.

The ARRL responded in January of 1992 by agreeing that the FCC should indeed relax the no-business communications rule and legalize more types of communications. They suggested that amateur radio operators should be permitted to conduct communications for themselves or for others that "...could reasonably be furnished alternatively through other radio services" as long as they did not do so "...on a regular basis."

Most amateurs didn't like the "on a regular basis" wording. They felt it was much too vague and wanted more specific wording. Actually the League merely borrowed those words from §97.113(a)(2) which prohibits amateurs from selling radio gear on the ham bands "...on a regular basis."

ARRL supported the proposed authorization for teachers to be compensated during the times they are using Amateur Radio in classroom instruction. "This is a new proposal, but one which the League believes is important to furthering study by young people of science and geography in the United States. Amateur

Radio is a proven source of interest in both disciplines, but its capabilities in the classroom are extremely restricted under the current rule."

The League also felt that all "...communications for hire or for material compensation direct or indirect paid or promised" except classroom instruction, telegraphy practice and information bulletins should remain in the rules.

Surprisingly, the League's proposal did not address the use of ham radio spectrum for personal business use ...a key component of the FCC's original recommendation. The Commission had repeatedly mentioned using amateur radio to conduct personal business - such as for ordering a pizza or making a hotel reservation - on the amateur air waves!

On June 18, 1992, the FCC released its long awaited *Notice of Proposed Rulemaking* (NPRM) to change the "Prohibited transmissions" rule §97.113 in the Amateur Radio Service. What the Commission did was to put the ARRL suggested communications guidelines out for public consideration. Still prohibited was "...music, communications intended to facilitate a criminal act, messages in codes and ciphers intended to obscure the meaning thereof, except as otherwise provided herein; obscene, indecent or profane words or language or false or deceptive messages, signals or identification." The comment period closed last October.

### ***New amateur communications guidelines***

The FCC reached their final decision on July 15, 1993. And although there are some exceptions, it appears the new amateur communications content standards will be essentially the one suggested by the American Radio Relay League.

Unless specifically prohibited, personal business, amateur-to-amateur transmissions with commercial or logistical components, and communications usually supplied by another radio service may now be transmitted on the ham bands. This is certainly a wide departure from the present guidelines! All amateur communications must, of course, still be voluntarily provided and may not result in a financial gain for the station operator or their employers.

Amateur radio communications now enters a new era. In the past, amateur radio basically existed for communications education, experimentation and emergency oriented communications. We can now add widespread public service and personal communications to the list ...including those with an incidental business element. It is indeed a major change for ham radio, one that should make the service very valuable to the average American citizen.



# W5YI REPORT

Nation's Oldest Ham Radio Newsletter

Page #4

August 1, 1993

## FCC Public Meeting

The primary guideline determining whether a transmission will be permissible on the ham bands will now be basically that the operator making a transmission nor his employer will be permitted to realize a financial gain from the communications.

We could be wrong, but it appears to us that just about anything else goes when the new rules go into effect. At this writing, we still do not have the text of the Report and Order (nor its effective date) so we don't know all the details of the new relaxed amateur service communications rules.

We do, however, have the text of the presentation given before the FCC commissioners on July 15th and the press release which followed. The remarks were made by William Cross, a Communications Analyst from the FCC's Washington, DC Personal Radio Branch, Private Radio Bureau. The FCC Commissioners approved the broadened amateur communications regulations after the presentation. Here is what Cross said:

"Good morning, Mr. Chairman and Commissioners. The Amateur Radio Service is for technically inclined persons who, for their own personal satisfaction, want to engage in self-training, information exchange, and experimentation. Many amateurs also provide public service communications voluntarily. This tradition is a hallmark of the Amateur Service in the United States.

"Currently there is a prohibition in the rules against any type of business or business-related communications. The Notice in this proceeding proposed to relax those restrictions through a new standard suggested by the American Radio Relay League, the largest national association of amateur operators.

"Under that proposal, any amateur-to-amateur communication would be permitted unless it is specifically prohibited, transmitted for compensation, or would result in a pecuniary benefit for the station operator or their employers.

"The proposed rules reflect the desire of the amateur community to make greater use of its communications capability. The Report and Order before you, therefore, would adopt the rule amendments substantially as proposed.

"Under the revised rule, for example, amateurs may provide logistical communications for their conventions and other public gatherings. They may collect and report data to government agencies such as the National Weather Service. They could not, for example, use Amateur Radio frequencies to operate a tow-truck dispatch service.

"The rule amendment is not intended to alter,

in any way, the nature or purpose of the Amateur Service. Rather, it will enable amateurs to better serve the public, and to enhance their personal communications capabilities.

"Accordingly, the Bureau recommends that this order be adopted, and requests editorial privileges. Thank you."

The commissioners made these comments during the deliberation period.

**FCC Commissioner Andrew Barrett:** "Mr. Chairman, I support the item."

**FCC Commissioner Ervin Duggan:** "I support the item but I have one question. Mr. Haller, a phrase leaped out at me when I looked down the list of newly permissible communications in the Amateur Service. It was the phrase 'Ordering Food'. Could you explain a little bit to me what that means and why it is included? I'm not in opposition, but I'm just intrigued.

**Private Radio Bureau Chief Ralph Haller:** "I hope I can give you a good idea of what that means. The amateur operators often have mobile communications equipment in their vehicles. This relaxation means, if they were for example on their way home, and wanted to have something ready so that they could pick it up and take it home, we would allow that in the Amateur Service as long as they were not receiving any compensation for it. So it's really just to make the radios in their vehicles more useful to them."

**Commissioner Duggan:** "I see. That answers my question."

**Chief Haller:** "The restrictions have been so great in the past, and I know you had a concern about this at the NPRM [proposal] stage. I think we've addressed that concern, but the restrictions were so great in the past that they could not even use their own radios for logistical support in their own conventions. And so what we're really trying to do is to relax and to get rid of rules that seem to make no sense in today's environment, without changing it to a business service."

**Commissioner Duggan:** "Fine. I support this item, Mr. Chairman."

**Acting FCC Chairman James Quello:** "I think it makes sense to provide amateur operators some flexibility in the transmission of signals."

The item was voted on by the three FCC commissioners and was unanimously adopted.



After the FCC meeting, the Private Radio Bureau issued the following press release:

## RESTRICTIONS RELAXED ON SCOPE OF PERMISSIBLE COMMUNICATIONS IN AMATEUR SERVICE - (PR DOCKET 92-136)

"The Commission has amended the amateur service rules in order to allow amateur operators more flexibility to provide communications for public service projects as well as to enhance the value of the amateur service in satisfying personal communications needs.

"The international Radio Regulations define the amateur service as a radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

"Part 97 of the commission's Rules prohibits amateur stations from transmitting any communications the purpose of which is to facilitate the business or commercial affairs of any party, or as an alternative to other authorized radio services.

"The amendment would allow the amateur service to expand its public service capabilities and to provide greater flexibility for personal communications.

"The amendment would allow licensees to use amateur service frequencies to facilitate events such as races and parades, to support educational activities, to provide personal communications such as making appointments and ordering food, to collect data for the National Weather Service, and to provide assistance voluntarily even where there are other authorized radio services available.

"The Commission was unable to accommodate the American Radio Relay League's request that the Commission provide a list of anecdotal examples of permitted and prohibited communications.

"The Commission stated that such a list would necessitate that the FCC intrude upon the day-to-day functioning of the service to a far greater degree than desired. The FCC also said that there would have to be thousands of examples, and declined to devote staff resources to the development and maintenance of such a list."

### **Broadcasting, pro and con**

A big unknown is the new rule's effect on broadcasting and news gathering for broadcasting purposes. In their comments the *Radio-Television News Directors Association* and the *National Asso-*

*ciation of Broadcasters* (RTNDA/NAB) noted that the proposed rule changes "...appear to advance news-gathering interests better than the current rule provision."

The current rule allows amateur transmissions related to broadcasting only when several tests are satisfied. The key test is that the information transmitted must involve "...the immediate safety of life of individuals or the immediate protection of property." The FCC proposed to simplify the wording of the rule but wanted to retain this test.

The broadcaster organizations, however, urged the FCC to "...eliminate entirely the rule provisions relating to the protection of property and the safety of human life." This would, for example, permit use of amateur frequencies for the non-emergency news and other operations of broadcast stations.

And it could happen! During remarks given at the FCC Forum held at the August 1991 ARRL National Convention, Ralph Haller (Private Radio Bureau Chief) did indeed mention the rules might be amended to allow amateurs to "...provide information to the news media, including broadcast stations, newspapers, and magazines."

On the other hand, the ARRL was adamantly opposed to turning the ham bands into "...instant information bands" for broadcasters "...with shrinking budgets and smaller news staffs." The League said broadcasters should "...be told once and for all that they may not exploit the Amateur Radio Service frequencies as they have repeatedly sought to do."

Another area that needs clarification is the retransmission of programs or signals emanating from other radio services.

### **Text of Order not yet issued**

The next step in this proceeding is for the FCC to issue a Report and Order (R&O) which details the consideration given to the public comments of their proposal. The Order will also state the new Part 97 Rules and its effective date. (Best guess is Sept. 1 which would be about 30 days after publishing in the Federal Register.) We understand that Section §97.113 of the Rules which covers prohibited transmissions has been completely rewritten.

It is anticipated that the text of the Order will be released next week and it stands to reason that there is more to this matter than can be determined from the FCC commissioner's meeting and press release. We will have more to say about the new permissible and prohibited amateur service communications in our next issue. In any event, the amateur service communications content rules have been enormously changed. Hopefully it is for the better.



# W5YI REPORT

Nation's Oldest Ham Radio Newsletter

Page #6

August 1, 1993

• The Detroit office of the FCC issued a NAL for \$18,000 to Ronald E. Roop of Wapakoneta, Ohio, for illegal operation, malicious interference and refusal to allow inspection of his station. (An NAL, *Notice of Apparent Liability for Monetary Forfeiture*, is an FCC warning of an imminent administrative fine.)

When investigating interference to the Allen County, Ohio Sheriff's Department radio system, FCC inspectors identified signals on 154.83 MHz coming from Roop's truck. Roop is the Police Chief of Uniopolis, Ohio!

• The Philadelphia FCC office has cited Leonard F. Shaner, Jr., of Pottstown, Pennsylvania, for maliciously interfering with a local ham repeater on 147.81 MHz. Shaner, who is unlicensed, was originally fined \$10,000. The NAL was later reduced to \$2,000 since it was his first offense.

Shaner said he has never made transmissions with his Radio Shack 2-meter hand-held transceiver and only uses the radio to listen to repeaters. Shaner, said he wants to become a ham operator, "...but the questions are very hard."

He believes that other CB operators who later passed their no-code Technician license requirements and became members of the Pottstown Area Repeater Association turned him in.

Engineers from the FCC's Philadelphia office visited Shaner's residence and made test transmissions from his installation which also included an external antenna. The NAL followed about a month later.

I asked Shaner if he had ever heard of an FCC transmitter identification process whereby a specific offending radio can be identified by a comparison of its radiated signal characteristics. He said he had not.

Shaner said he no longer even has the 2-meter radio since one of his CB friends "borrowed it" to use and then turned it in to the local police station.

The FCC also is looking into possibility that he might be involved in the illegal jamming of the 150 MHz Fire Radio Service. Shaner said he has placed the entire matter in the hands of his attorney.

• The Los Angeles FCC office cited the Beverly Hills School District for operating an illegal station; the school received a NAL for \$8,000.

• AMSAT-NA President, Bill Tynan (W3XO) today announced two new Vice Presidential appointments.

Keith Baker (KB1SF) was appointed as Vice President for Strategic Planning. Keith will work closely with Board members and others to attempt to come up with a long rang plan for AMSAT after completion and launch of Phase 3D. As many may know, Keith is also an active member of the Phase 3D Development Team, responsible for planning and scheduling. So perhaps, this additional new assignment naturally follows.

In a simultaneous move, Tynan also appointed Bruce Croskey (WA6JCD) as Vice President for Development ...which can be freely translated as "Fund-raising". Bruce is a long time AMSAT member and is active on the satellites. He brings to his new AMSAT position a long history of experience in sales and promotion.

On July 10, Bill Tynan W3XO joined Keith Baker (KB1SF), Bruce Croskey (WA6JCD), Bill Pasternak (WA6ITF) and Forrest Oden (N6ENV), and Charlie Justinak (W7GBI) at the Phoenix, Arizona home of Senator Barry Goldwater (K7UGA). Also present was

a cameraman from Phoenix Channel 12. The purpose of this assemblage was to re-shoot some of portions of the Phase 3D video tape made by Senator Goldwater last year. This was, of course, necessitated by the configuration change forced on AMSAT by the European Space Agency.

In addition to getting the desired footage with the new model of the space-craft constructed by Stan Wood (WA4NFY), Senator Goldwater added many kind words for AMSAT and its work.

The revised version of the tape, which will also include footage being taken in Germany this summer of the construction of the full scale engineering model of Phase 3D, will be available for distribution this fall.

• The Chicago Sun-Times of July 14, 1993 (p. 14) had an article entitled: "Too Much Static Kills Bid to Ban Scanners" by Fran Spielman. The story suggests that an anti-scanner ordinance did not get enacted. It said "Alderman Lawrence Bloom (5th) convinced the Police Committee to endorse a substitute bill that will make it illegal to use a scanner to 'aid or abet the performance' of a criminal act after receiving 'dozens' of letters and phone calls from 'amateur radio operators' who objected to the original mobile scanner ban."

• Glen Baxter, K1MAN, reports that one of his International Amateur Radio Network volunteers in Somalia, Sam Voron (VK2BVS) was issued Somalia Amateur Radio License No. 1 on March 29, 1993 with the call sign 6OØA. Authorized frequencies include: 1.5-1.8; 3.850-4.0; 7.1-7.5; 9.3-9.5; 21.450-21.900; 25.9-26.1; 26.96-27.41; 88-108; and 416-420 MHz. Television broadcasts may also be conducted on any unused standard VHF or UHF television channels!



- The free ride is will soon be over! Electronic messages from the mammoth Internet will no longer be delivered free to all commercial electronic mail users.

The Internet is the ever-expanding non-commercial "network of networks" which is subsidized by the U.S. Government. It is primarily used by business, government and educational institutions.

Most commercial E-Mail services charge only the sender - not the recipient. At least one E-Mail service (CompuServe, Inc.) accepts Internet mail (which is posted virtually free) but delivers the mail with a 15¢ "postage due" tag. MCI-Mail and AT&T's EasyLink are also looking into ways of recovering the cost of carrying Internet traffic.

We also understand that CompuServe will shortly be introducing a new "reverse the charges" E-Mail service. The end user (rather than the sender) pays the "postage" - even on totally commercial electronic mail.

- Even the White House is "on-line." Pres. Clinton is thinking about adding Internet capability to every library in the country so every citizen will have access to it.

The NTIA is seeking \$51 million to underwrite various networking pilot projects for schools, hospitals, libraries, museums and state and local governments.

The administration will not construct, own or operate a government network that competes with commercial facilities. Instead, the administration plans to purchase or lease telecommunications services from the private sector.

- Radio and television broadcasters are very concerned about the new FCC proposed radiation exposure regulations. The April 1993 NPRM establishes two exposure standards: one for "controlled environments" (for workers) and the other for "uncontrolled environ-

ments" - usually the public. The public area guidelines are five times more stringent than controlled environments.

Low powered hand-held devices are affected as well as high powered broadcast transmitters. If adopted, many of the nation's broadcasters will have to take corrective action to reduce public exposure.

The FCC is even proposing to require additional information concerning "environmental impact" on all license renewals. So far, there seems to be little impact on the amateur service, but it could happen! Comments close Aug. 13.

- This newsletter (and the last one) were prepared using WordPerfect's new Version 6.0 for DOS. It features both a standard text and a brand new graphics mode. Present users can upgrade for \$129 (although the street price from a reseller is around \$85.)

The graphics mode uses new quick access "Button Bars" that resembles "windows" and scalable internal fonts with WYSIWYG capability. There is even built in grammar checker and spreadsheet software.

Reportedly the Orem, Utah, based private company, is set to go public. WordPerfect began operation in 1979 and now has some 4,500 employees and sales of nearly \$600 million!

- IBM is poised to take advantage of Microsoft's problems with their MS-DOS 6.0 operating system. "Big Blue" just introduced a new PC-DOS 6.1 with improved (they say) data compression technology and memory management. Many MS-DOS 6.0 users say they have experienced lost and corrupted data with the DoubleSpace data compression utility.

Microsoft's CEO, Bill Gates believes that cable companies are in the best position to compete on

the Clinton administration's digital information superhighway. He is talking with cable companies about forming an alliance to provide multimedia and interactive products for future digital systems. In short, Microsoft wants to set the standard for interactive TV.

And a three year investigation of Microsoft's sales practices by the Federal Trade Commission concluded that they did not violate antitrust laws.

- After a poor profit year, John Scully has stepped down as CEO of Apple Computer and there are rumors of a big employee lay-off. He is still chairman, however.

Like Bill Gates, he foresees multimedia and interactive technology as the wave of the future. Scully recently unveiled EZTV set-top converter software for all levels of video-on-demand. EZTV's main "Info Mart" menu provides a template of video service categories.

- Another shining star that isn't shining so well lately is Dell Computer! Their failed notebook strategy caused an \$80 million inventory markdown. Dell stock sank to a low of \$14 - down from nearly \$50 last year! Their 100% growth rate is now down to 55%.

- The ARRL has sent out a massive mailing to members asking for their financial support of AMSAT's Phase 3D Amateur Satellite Project. "The Phase 3D satellite will utilize amateur bands from 10 meters to 10.5 GHz (3 centimeters) and weigh nearly 900 pounds. Once in orbit, Phase 3D will not require sophisticated tracking. The satellites highly elliptical orbit means that it will rise rapidly in the sky and will appear to hang, almost stationary, for several hours at about the same time every other day - perfect for making schedules with simple equipment, even while mobile!"



# W5YI REPORT

Nation's Oldest Ham Radio Newsletter

Page #8

August 1, 1993

● In our last issue we mentioned that we were told that a 1987 FCC Public Notice was the basis of the commission's decision to issue \$21,000 in NAL's (administrative fines) against three West Coast ham equipment dealers for selling the Kenwood TS-50S. This is the HF transceiver that was initially promoted in a sales flyer to operate (both receive and transmit) above and below the ham bands. Here is that text:

## PUBLIC NOTICE

July 21, 1987

FEDERAL COMMUNICATIONS COMMISSION  
1919 M Street NW, Washington, DC 20554

## EXTENDED COVERAGE TRANSCEIVERS IN THE AMATEUR SERVICE

The purpose of this Public Notice is to clarify the Commission's Rules regarding equipment that is intended to operate in the Amateur Radio Service (ARS), and also in other radio services.

The Commission has noted that a number of transceivers marketed for use in the ARS are also capable of transmitting in the adjacent bands allocated to other radio services, such as the Private Land Mobile Radio Services and the Maritime Services. Some manufacturers are offering conversion kits to permit their transmitters and receivers to be modified so that they can operate in a similar manner.

The manufacturers and users of such devices are reminded that transmitters intended for operation on frequencies allocated to most of the licensed services, e.g., the Private Land Mobile Radio Services, Maritime Services, etc., must be type accepted by the Commission for the particular radio service in which they are intended to operate prior to the marketing or use of such devices. Transmitters used in the ARS, as well as transmitters used by the Civil Air Patrol (CAP) and the Military Affiliate Radio System (MARS) must comply with the applicable standards but are not required to be type accepted.

It is a violation of the Commission's regulations to: (1) market an ARS transmitter that is intended to operate, also, on frequency bands outside of the ARS, CAP, or MARS bands without a grant of equipment authorization required for the radio service(s) in which the transmitter operates; (2) market or operate a transmitter that requires a grant of equipment authorization but for which no grant has been issued; or (3) transmit on a frequency allocated to a licensed service without the appropriate commission-issued station license.

For further information concerning this Public Notice, contact Mr. John Reed at Room 7122, FCC, Washington, D.C. 20554, (202) 653-7313

- FCC -

## AMATEUR RADIO CALL SIGNS

...issued as of the first of July 1993:

Radio District	Gp. "A" Extra	Gp. "B" Advan.	Gp. "C" Tech/Gen	Gp. "D" Novice
Ø (*)	AAØOE	KGØHD	NØXRX	KBØLJZ
1 (*)	AA1GY	KD1PZ	N1PRM	KB1AZO
2 (*)	AA2OQ	KF2QE	N2VRQ	KB2QKK
3 (*)	AA3FD	KE3JF	N3PQT	KB3AWR
4 (*)	AD4GZ	KQ4YF	(***)	KE4DMW
5 (*)	AB5OK	KJ5NZ	(***)	KC5BPS
6 (*)	AB6UR	KN6OB	(***)	KD6YUR
7 (*)	AA7XE	KI7OU	(***)	KB7WCK
8 (*)	AA8LT	KG8CL	N8ZPJ	KB8PCH
9 (*)	AA9HR	KF9QI	N9UFS	KB9ISZ
N. Mariana Is.	AHØT	AHØAN	KHØCA	WHØAAX
Guam	NH2R	AH2CT	KH2HB	WH2ANG
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii	(**)	AH6MX	WH6NR	WH6CQQ
Kure Is.			KH7AA	
Amer. Samoa	AH8H	AH8AF	KH8AX	WH8ABB
Wake W. Peale	AH9C	AH9AD	KH9AE	WH9AAI
Alaska	(**)	AL7PD	WL7LZ	WL7CHE
Virgin Is.	WP2A	KP2CC	NP2GN	WP2AHU
Puerto Rico	(**)	KP4VL	(***)	WP4MEH

\* = All 2x1 "W" prefix call signs have been issued.

\*\* = All Group "A" call signs have been assigned

\*\*\* = Group "C" call signs have now run out in these areas.

[Source: FCC Licensing Facility, Gettysburg, PA]

## PIRATE TO BROADCAST FROM THE HIGH SEAS

Do you remember Radio New York International, a pirate radio station that was operated some years ago by Alan Weiner from international waters outside the U.S. three mile limit. They were eventually busted by the FCC. Now there are rumors that another ship, the "Fury Five," (a rusty 165 ft. x 30 ft. former North Seas fishing trawler) is being outfitted in East Boston harbor with radio broadcast equipment for another try at international pirate ocean broadcasting. This time it will be a rather novel satellite-to-radio lashup!

Reportedly the "chief engineer" putting the station together is none other than RNI's Alan Weiner. We understand he is even using parts scrounged from the M/V Sarah (the former home of RNI) and other radio stations. His status is that of an employee. Weiner was supposedly hired by the ship's owner, a satellite time broker and LPTV station owner/operator.

This "owner" also leases satellite time to "Brother R. G. Stair," a rather freewheeling 24 hour-a-day short-wave evangelist who broadcasts on WWCR (World Wide Christian Radio 7435 kHz) and WRNO (Radio



New Orleans 7355 kHz). Reportedly, Brother Stair is a major investor in the short wave radio ship venture. And it is possible that RNI could also return to the air via this shipboard station.

There are many legal questions about broadcasting from a ship at sea. For the most part it is illegal. However, there are certain questionable ITU regulations about a country's ability to issue a permit to someone to legally broadcast from a seagoing vessel. Many facts are being kept secret until the ship is on the air ...including the country approving the broadcasting (which is also the country of registry).

We heard that the ship is authorized by a Caribbean country, and that it will eventually be stationed in the western Mediterranean. The country issuing the permit supposedly did so in exchange for broadcast time. Another source told us that the ship would broadcast from the Caribbean - which certainly makes more sense. Actually much of what we are being fed is conflicting and some reports may be purposely incorrect to throw the authorities off guard.

Supposedly the ship's transmitting location was determined by the footprint of the satellite that delivers Brother Stairs' radio service, GTE Spacenet 2. His programming is to be received on a \$48,000 satellite receiver that is designed for seagoing reception and broadcast 24-hours worldwide over one of the two 40kw shortwave transmitters on board. Also on board are two 10kw shortwave transmitters.

The 40kw and the 10kw's will be available to anyone wanting to buy broadcast time. Brother Stair even originated his programs a couple of weekends ago from the studio on the boat as part of a progress report on its construction.

Also on board is a 20kw, self-contained, UHF TV station for the exclusive use of the country authorizing the ship. In addition there are AM and FM broadcast band transmitters that can also be used exclusively by the country if they so decide.

The ship itself is powered by a single 1200 HP, 12 cyl. engine, top speed is 16 knots. Ship power is provided by an 80 KVA generator and a 75 KVA generator. 250 KVA and 60 KVA generators have been installed to provide power to the broadcast equipment, an auxiliary generator is on order. The first of 3 towers has been installed, the remainder of the antenna system will be completed in a few weeks. Right now the wiring is being completed between the transmitters and the studio.

They expect to set sail on September 15 and begin broadcasting in late October. Although the frequencies have not been announced, they plan to make test transmissions on 7415 kHz while enroute, after they are outside of US waters. It will be interesting to see if all of this actually comes to pass!

## MICRO POWER BROADCASTER GETS \$20,000 NAL

The FCC has issued a *Notice of Apparent Liability*, in the amount of \$20,000, against Stephen Dunifer and his Radio Free Berkeley (California) for allegedly broadcasting without a license. They believe the FCC should provide for low power broadcasting as a first amendment right to free speech. *[Editor's note: Actually the Radio Act of 1927 marked the end of the principle that access to the airwaves was a basic right of every American citizen, limited only by the availability of spectrum space. The Act reduced that "right" to a "privilege" to be granted only when a broadcast license would serve the public interest. This action was later upheld by the U.S. Supreme Court since there are substantially more individuals who want to broadcast than there are frequencies to allocate.]*

Dunifer's attorney, Louis Hiken, filed a 13 page response that says the FCC action is "...unwarranted, procedurally flawed, constitutionally invalid, and calls for a forfeiture amount that is grossly disproportionate to the alleged violations and which exceeds the maximum limits set by statute".

The response further charges that "FCC policies with regards to micro radio broadcasting have failed to keep pace with the rapid proliferation of technological advances in the field of communications. The FCC's current regulatory scheme completely prohibits micro radio broadcasters and their listeners from accessing the public airwaves. To enforce this absolute prohibition, the FCC is relying upon regulations which were intended solely for application to large-scale, commercial broadcasters, and which were promulgated long before the advent of technology that makes possible micro radio; indeed, even before the advent of FM broadcasting. The FCC's application of these regulations violates the First Amendment rights of individuals seeking to exercise those rights via methods and mediums that were technologically impossible when the regulations were created."

Dunifer says "the fundamental problem is that the FCC has not provided procedures by which micro radio broadcasters can become licensed or authorized. Instead, the FCC is applying severe administrative and criminal sanctions, intended for application to largescale operators, to micro radio broadcasters with the goal of completely precluding all such broadcasts."

Dunifer wants to "...establish a clear and binding legal precedent which will protect the internationally recognized right of communication between individuals and communities." He said "Despite the most recent actions of the FCC, Free Radio Berkeley will continue its weekly Sunday broadcasts as a community free speech project, from 9 PM to 12 Midnight at 88.1 on



the FM band. We will not be silenced by federal agencies who hide behind a facade of serving the public interest to mask their flagrant abuse of regulatory power, public money and resources to defend, promote, and serve private corporate media interests."

Peter Franck, speaking for the National Lawyers Guild Committee on Democratic Communications (NLG CDC), stated, "The NLG CDC has laid the groundwork for the defense of Mr. Dunifer and Micro Radio practitioners. The work of the CDC focuses on the rights of all people to have a world-wide system of media and communications based on the principle of cultural and informational self-determination. Its research has led it to find that the FCC's ban on low power community broadcasting violates both the US Constitution and International Human Rights Law.

Full length copies of the brief may be obtained by calling Radio Free Berkeley. On Wednesday, July 14 a public forum was sponsored by a newly formed organization, the Free Communications Coalition (FCC). The forum was entitled - Micro Power Broadcasting and the Right to Communicate.

Radio Free Berkeley is also making 1 to 5 watt FM broadcast kits available at a cost of \$40 each and they want as many low power broadcasters as possible to go on the air simultaneously. "If only a few operations go on the air, it will be very easy for the Feds to nail people. Consider it a form of electronic civil disobedience or however else you want think about it. Free speech rights have to be constantly fought for." Radio Free Berkeley, 1442 A Walnut St., #406, Berkeley CA 94709 - (510) 464-3041.

## AMRAD-OSCAR: A UNIQUE AMATEUR SATELLITE

If all goes according to plan, at 2130 EDT on August 31, 1993, the Ariane V-59 rocket will roar aloft from Kourou, French Guiana (the equatorial site favored for launches) carrying three Amateur satellites among others. Two of those satellites, ITAMSAT (Italy) and KITSAT-B (Korea) have received international coverage in the Amateur press.

Recently, the third Amateur satellite was revealed to the W5YI Report: AMRAD-OSCAR, a special communications payload designed and constructed by the Amateur Radio Research and Development Corporation (AMRAD), a worldwide club of Amateur Radio and computer experimenters. The group has also been responsible for key elements of Amateur packet radio, spread spectrum, bulletin board services and other technologies. OSCAR stands for Orbital Satellite Carrying Amateur Radio. The purpose of AMRAD-OSCAR is experimentation in new communications protocols, modulation schemes and hardware.

AMRAD-OSCAR is a portion of a commercial

communications satellite, EYESAT-A, developed by Interferometrics Inc., a radioastronomy and precision tracking services firm in Vienna, Virginia. EYESAT-A uses the Microsat "bus", or structure, created by the Radio Amateur Satellite Corp. (AMSAT) and licensed exclusively to Interferometrics. PACSAT, DOVE and other Amateur satellites also use this bus. Funding for the satellite is coming from AMRAD members and Interferometrics.

We were fortunate to observe the satellite under construction by AMRAD members. Their lab includes a low-temperature testing facility that simulates the frigidity of space - it was a Sears food freezer! Testing in the freezer caused some amplifier components to fail. These were replaced.

We also learned of Interferometrics' interesting capabilities, including rapid detection and location of unauthorized ground station transmissions to satellites originating anywhere in the U.S.

AMRAD-OSCAR is believed to be the first Amateur payload on a true commercial satellite. "If Amateurs experiment with different packet systems and protocols, making better use of the spectrum, this benefits the commercial world as well as the Amateur world," according to AMRAD-OSCAR Principal Investigator Mark Kanawati, N4TPY. "This is not your ordinary spacecraft for everyday use. We hope to push the frontier further, to experiment with very unique protocols and modulation schemes, which could be released later to the Amateur Service."

## Summary of AMRAD-OSCAR

**Construction:** Microsat bus is a stack of five frames, forming a 12 kg cube with solar panels on each face. NEC Microprocessor CPU, NiCd batteries, VHF whip antenna on top, 4-element circularly polarized UHF turnstile antenna on bottom.

**Communications:** Five-channel commercial VHF receiver; two-channel Amateur VHF receiver, two commercial UHF transmitters, one Amateur UHF transmitter.

**User Uplink to satellite:** 145.850 MHz. User Downlink from satellite: 436.800 MHz. Modes include a "bent pipe" analog FM transponder mode, which requires the ability to transmit on 2M and receive on 437 MHz.

**Uplink Modulation:** FSK @ 300-9600 bps and analog FM.

**Downlink Modulation:** FSK @ 300-9600 bps and analog FM. Also AFSK @ 1200 bps (may be received using ordinary TNC and UHF receiving gear. Because protocols may not match typical packet communications mode, set TNC to KISS mode or PASSALL ON to receive data.)

**Orbit:** 800 km sun-synchronous near-polar, 98.7 degree inclination

**AMRAD and AMSAT** will make available information on ground station requirements and Keplerian elements as the project progresses. (AMRAD, PO Box 6148, McLean VA 22106-6148. AMSAT, PO Box 27, Washington DC 20044.)